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*Creating a Traffic Safety Culture – A Case Study of Four Successful States  
Case Study Four: Minnesota*

**PRELIMINARY DRAFT  
FINAL REPORT**

*Prepared for  
National Cooperative Highway Research Program  
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Of  
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## ABSTRACT

This is the final in a series of reports intended to document results from four case studies. Conducted in four States – Iowa, Michigan, Minnesota and Washington – the studies were designed to identify which technical and institutional factors most likely led to the creation of a successful culture of safety. The fourth study, conducted in Minnesota, included interviews held with selected key Federal, State, and local safety officials. The interview questions were centered on four key focus areas – background information, organizational leadership, political leadership and institutionalizing safety. A change in the leadership approach in the early 2000s and subsequent setting of an aggressive Toward Zero Deaths vision, documented in the report, have led to the lowest fatality rate in the State’s history and one of the lowest in the nation. The findings indicate that a foundation for addressing traffic safety issues and setting strong policy had been set in the past. It was not, however, until after the leadership of the State agencies mandated that their staffs work in a more collaborative manner that significant safety achievements generated outstanding results. There is a commitment to accessible, high quality data collection and analysis systems as well as a strong outreach program to local units of government. These programs have bolstered the State’s ability to identify and implement data-driven, research-based strategies as outlined in their comprehensive highway safety plan. The State is now engaged in the final stages of converting to a Strategic Highway Safety Plan and remains firmly focused on moving Toward Zero Deaths.

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## CREATING A TRAFFIC SAFETY CULTURE - MINNESOTA

### *Foreword*

The Federal Highway Administration (FHWA) and the National Cooperative Highway Research Program (NCHRP) in cooperation with the American Association of State Highway and Transportation Officials (AASHTO) sponsored this Case Study to document organizational elements that support successful State programs and strategies to reduce highway fatalities and serious injuries.

The Case Study examines the technical and institutional factors implemented by the State Departments of Transportation (DOT) and State Highway Safety Offices (SHSO) in Iowa, Michigan, Minnesota and Washington that resulted in a culture of safety in each State. These States were selected based upon their success in reducing fatalities and serious injuries over time. The Case Study covers the past 30 years and focuses on key milestones, individuals and agencies. The champions of safety and the actions that led to both immediate gains and sustained safety achievements over time are highlighted. The Case Study for each State is contained in a separate report. An executive-level presentation describing common themes noted in all four States will also be available.

The primary focus of this Case Study is the role of the State DOT and the SHSO in supporting the traffic safety culture. Interviews were conducted in each State with the Governor's Highway Safety Representative/SHSO Director, the DOT Safety Engineer and Planner, FHWA and National Highway Traffic Safety Administration (NHTSA) representatives, Metropolitan Planning Organizations (MPOs), and local agencies. Although additional key State and local traffic safety partners have made significant contributions to the State safety programs, they were not individually interviewed for the Case Study and their contribution is referenced only in a general manner.

The target audience of the Case Study is the mid and higher levels of leadership in the transportation safety community, including the DOT Safety Engineers and SHSO Directors who are responsible for implementing the State Strategic Highway Safety Plans (SHSP). It is hoped that sharing these lessons learned will provide other States with useful information and guidance to further enhance their safety programs.

### *Executive Summary*

While the nation as a whole struggles to attain a reduction in the traffic fatality rate, some States have found themselves in the enviable position of not only meeting but exceeding their goals. If they have discovered a new approach which is saving many more lives and breaking past records, it is essential that their formula for success be shared with others who are attempting to achieve similar results.

One such example well worth examining is the experience of Minnesota. In 2006, the State recorded the lowest fatality rate in its history and one of the lowest in the nation – 0.9 deaths per 100 million vehicle miles traveled. Even better yet, the number of deaths was 65 fewer than the previous year and a continuation of a three-year decline in roadway fatalities. Just a few short years earlier, the picture would have been painted in a different direction.

The State had a long tradition of focus on traffic safety policy and programs. An early implementer of a strong law to address impaired driving through administrative license revocation, the State experienced significant reductions in alcohol-related fatalities. And, a series of combined seat belt and impaired driving enforcement campaigns with statewide reach were making a difference. The quality and accuracy of the State's data system had always been a top priority. A number of analysis tools were developed for use by local units of government and a wide variety of outreach programs were made available. Other initiatives spearheaded separately by the Department of Transportation and the Department of Public Safety's Office of Traffic Safety had met with some success but were actually operated autonomously.

When faced in the late 1990s with the challenge of dueling agencies, traffic safety initiatives often resulted in turf wars, frustration and little progress. The catalyst for improvement was the insistence of the Commissioners of the Minnesota Departments of Transportation and Public Safety that their staffs, from multiple internal divisions, meet to collaboratively address traffic safety issues. Charged with that objective, the two agencies met monthly to identify common partners and develop the groundwork of a productive working relationship. Although the initial meetings were often tense and non productive, eventually common interests between the Department of Transportation representatives and the State Patrol were identified upon which a collaborative foundation began to be built. Soon after, the North Star Workshop was convened with the assistance of the University of Minnesota to bring together traffic safety advocates from across the State representing many disciplines. Boosted by the momentum, additional common goals were identified and a convergence of the two agencies' leadership was created. The State then took its next bold step – establishing the vision of Toward Zero Deaths. This focal point became the foundation of the State's new Comprehensive Highway Safety Plan. Data driven and research based, the plan identified the five most critical emphasis areas to be addressed with corresponding strategies and an estimate of effectiveness based on cost and the potential number of lives saved.

To assist the State and local agencies in implementing the plan, a Safety Toolbox of strategies was made available. The State Legislature had, in the past, recognized the importance of providing funding mechanisms for roadway and safety improvements. But given the new challenges outlined in the strategic plan, the Department of Transportation and the Department of Public Safety's Office of Traffic Safety jointly decided to create a Central Safety Fund. The State's section 164 Federal transfer monies were used to provide additional resources for supporting the strategies especially at the



local level. Reinforcing the framework of State leadership, local government agencies and county engineers statewide also stepped up to the challenge. And, a wide variety of non-profit organizations and industry representatives recognized the valuable support role that they could play not only within the communities, but also at the State Capitol in advocating for tougher laws.

Two critical champions emerged to help lead the effort: the director of the Office of Traffic Safety and the Department of Transportation's State Traffic Engineer. Committed Federal agency partners also recognized the value of establishing a close working relationship with the State as well as the cities, counties and metropolitan planning organizations that needed additional technical assistance and resources.

Today the Toward Zero Deaths coalition is in the process of taking the final steps toward the conversion and update of their initial strategic plan to become the State's official Strategic Highway Safety Plan. Portions of other related safety plans will be integrated into the Strategic Highway Safety Plan.

Minnesota has proven that State leadership agencies working in a closer partnership with other State agencies, local governments and public and private partners – under a combined vision to work toward an aggressive goal – can make significant gains in reducing roadway fatalities. It is this winning formula that will keep the State vigilant and guide them toward discovering new programs, implementing new policies and meeting future challenges as they continue to move Toward Zero Deaths.

## ***I. Introduction***

Although a culture of traffic safety had existed in Minnesota for quite some time, it is in the more recent years that the State has made its most dramatic improvements. Fully understanding the past history and programs, as well as the evolution to the specific emphasis provided by today's program, is essential to appreciating the critical impact that this fairly new change in direction has made.

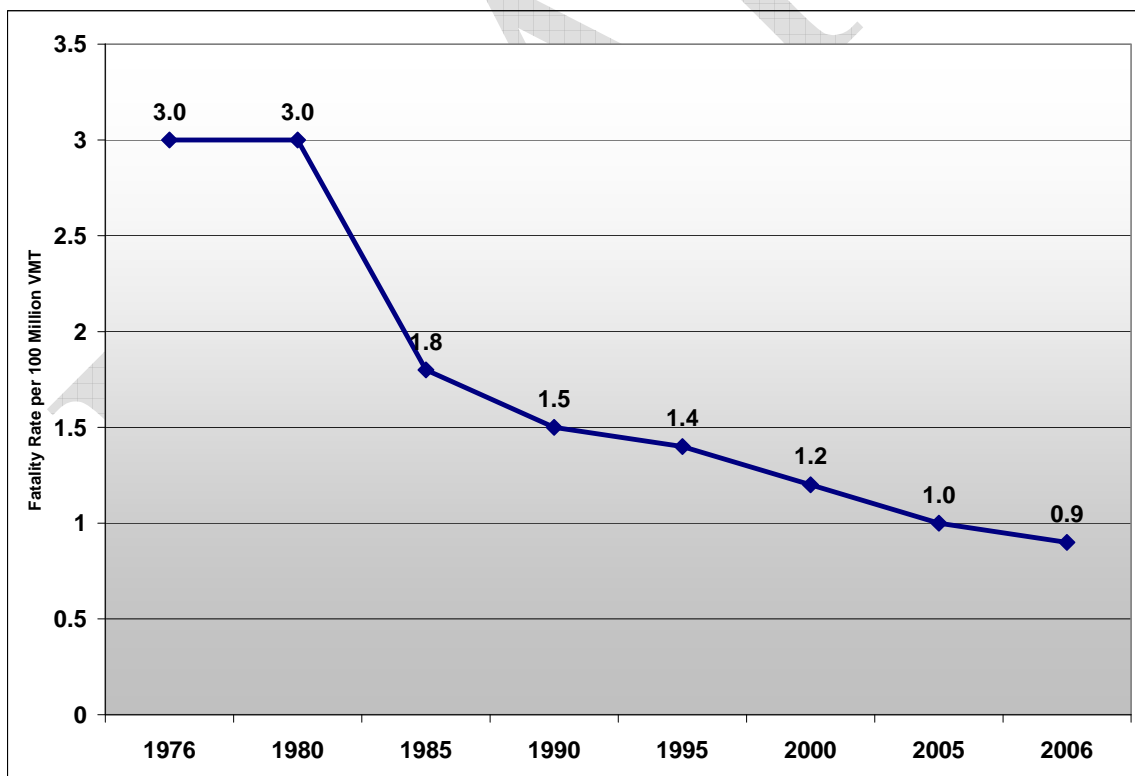
**TABLE 1. MINNESOTA 2006 ROADWAY CHARACTERISTICS**

- Population: 5,210,000
- Registered Drivers: 3,871,160
- Registered Vehicles: 4,760,872
- Roadway Miles: 135,000
  - State: 9%
  - Local: 91%
- Annual VMT: 56.6 billion

SOURCE: Crash Facts 2006, Minnesota Department of Public Safety – Office of Traffic Safety and the Minnesota Department of Transportation

With the application of engineering improvements and behavioral programs and policies, Minnesota's fatality rate had begun to steadily decline in the late 1970s proving the State's early collaborative efforts between organizations to be successful. Programs - primarily directed at reducing impaired driving - were able to both increase seat belt use, as well as address speed-related crashes. In fact, even as the number of overall fatalities began to level off in the 1980s, the fatality rate continued to fall. After celebrating over a decade of success, however, the 1990s brought no consistent gains and were instead followed by a sharp increase in fatalities: 568 deaths in 2001 as compared to 657 deaths in 2002.

Minnesota's inability to attain further reductions in the number of fatalities sparked a great deal of attention and controversy. Questions were raised over how to best manage and ultimately reduce the State's growing traffic safety problem. Frustrated by a lack of collaboration between State organizations, the Department Commissioners required that representatives of the Department of Transportation (Mn/DOT) and the Department of Public Safety (DPS) Office of Traffic Safety (OTS) begin working together to rectify the situation with a single focus, thus initiating the many great strides that have been made since that time.



**Figure 1. 1976-2006 Minnesota Fatality Rate per 100 Million Vehicle Miles Traveled**

SOURCE: Minnesota Department of Public Safety – Office of Traffic Safety

The percentage of alcohol-related fatalities fell from 52 percent in 1984 to 35 percent in 2005. Although fatalities peaked in 1978 at 980 deaths, a dramatic reduction occurred from 2002 to 2006 when the number dropped from 657 to a current record low of 494 deaths. The State's seat belt use rate in 2006 held at 83 percent despite having a secondary enforcement law. Moreover, that year the State's fatality rate fell to under 0.9 per 100 million vehicle miles traveled – one of the lowest in the country. The willingness and ability of the leaders of the State agencies to develop an enhanced collaborative approach to traffic safety resulted in this outstanding achievement.

## *II. Findings*

### **Laying the Groundwork**

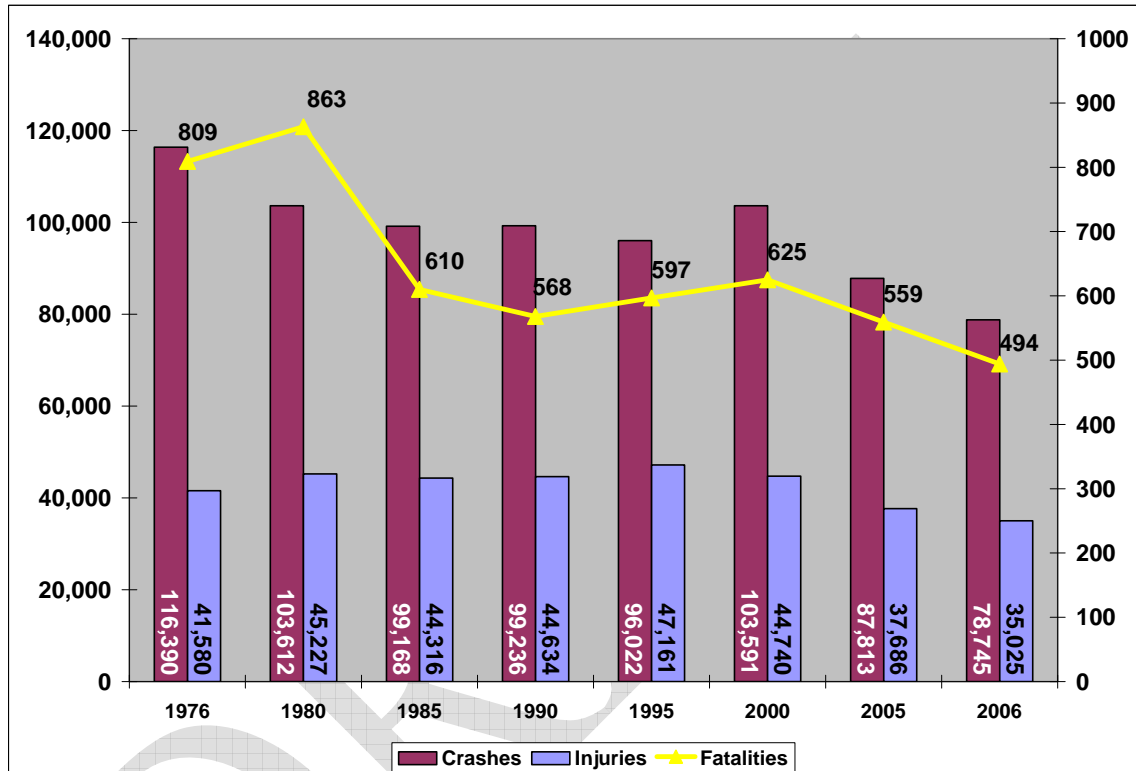
#### **Minnesota's Traffic Safety History**

The partnership which did exist between Mn/DOT and OTS, prior to the 2001 initiative to increase collaboration, allowed Minnesota to hold the line over the years on traffic-related fatalities. This was the case even as the number of vehicle miles driven began to increase. Despite the need, which was recognized later, for even more aggressive efforts and drastic improvements, these past accomplishments cannot be over looked. As a result of the State's efforts at that time, fatalities in Minnesota showed a dramatic decline: from 809 in 1976, to 558 in 1983, just seven years later. Following is a synopsis of some of the key programs that are most recognized for contributing to early successes as well as providing a foundation for future programs.

A big share of the initial reductions in traffic fatalities is credited to an early and aggressive policy toward limiting impaired driving. In fact, Minnesota was the first State in the nation to enact an **administrative license revocation law**, commonly referred to as ALR, in 1976. Enhancements to the law over time have contributed to significant cultural change and heightened awareness toward impaired driving on the part of the public.

Minnesota has also placed emphasis on the implementation of federally funded behavioral based programs. The Federal Inter-modal Surface Transportation Efficiency Act (ISTEA) -- passed by Congress in 1991 -- provided additional funding to OTS for grants to enforce seat belt and impaired driving laws. The ability to direct additional funding at enforcement efforts was a key factor in the State's ability to reduce fatalities through the 1990s. Called the '**Safe & Sober**' program in keeping with the name of the Federal initiative, these periodic enforcement mobilizations directed at both impaired driving and seat belt use initially were worked primarily by the DPS State Patrol. With the expansion of the program, the OTS was able to widen their outreach to local agencies and communities across the State. Today, there are very few law enforcement agencies that have not participated in Safe & Sober. Over time, a network of safety conscious law enforcement agencies has developed, touching every community in the State. Currently 75 percent of Minnesota's law enforcement agencies reach 85 percent of Minnesota's population with a strong message to wear seat belts and prevent impaired driving.

Grant funding provided by OTS also supports training for participating officers including: Standardized Field Sobriety Testing (SFST), Occupant Protection Usage and Enforcement (OPUE), and driving while impaired (DWI) law update classes. OTS also offers Drug Recognition Expert (DRE) training to enhance patrol officers' SFST skills. The enforcement techniques developed by law enforcement agencies through the Safe & Sober program are now considered the 'norm' for conducting enforcement operations in the State.



**Figure 2. 1976-2006 Number of Minnesota Traffic Crashes, Fatalities and Injuries**  
 SOURCE: Minnesota Department of Public Safety – Office of Traffic Safety

In addition to building a collaborative multi-agency enforcement program, Safe & Sober provides the OTS with opportunities for training in earned media, public relations, community outreach, and working with prosecutors and the courts. These early and ongoing efforts to build a collaborative enforcement and community outreach program through Safe & Sober were instrumental in creating relationships that would later serve the State well when stepping up its safety initiatives.

Continuity and stability within the OTS has been another major factor in maintaining a consistent, high profile focus on key traffic safety programs. OTS has only had four directors since it began in 1969 with the latest director only recently appointed in 2007. The level of commitment and value of the lengthy experience of these individuals in supporting a culture of traffic safety in Minnesota cannot be overestimated.

Another key component of the State's traffic safety history is the early development of the **Road Information System**. First implemented in 1975, the system allowed crash coding forms to include reference points for locating crashes. This was the beginning of bigger and better things to come. Eventually, the State built a database that could track where crashes were taking place on trunk highways. By examining the crash results, Mn/DOT was able to identify areas where upgrades should be implemented. Using data to identify problem areas and direct overtime enforcement funding to those areas, Minnesota has been effective in targeting areas of the State where the most gains could be made.

A number of programs focusing on engineering related improvements were also begun. The FHWA actively encouraged Mn/DOT to initiate programs to **inventory traffic control devices and install upgrades**. Established through the 1970s and 1980s, these measures were instrumental in preventing increases in traffic-related fatalities.

Through the 1970s, following a review of all roads, Mn/DOT began a program to systematically upgrade guardrails, signage, and no passing zones. Federal funding to support the changes during this period was a key factor in Minnesota taking a comprehensive statewide approach to reviewing bridges, curves, and fixed objects that could lead to crashes. Break-away posts and light poles were installed to mitigate the results of run-off-the road crashes. Moreover, a clear zone concept was implemented in work zones.

Beginning in 2000, Mn/DOT created **lists of the top 200 intersections and 150 roadway sections** with the highest crash costs ranked from worst to best. The list, which is revised annually, includes 200 intersections on the trunk highway system, and 150 roadway sections. The main goal, after identifying these high crash areas, has been to include the projects in the Statewide Transportation Improvement Program (STIP) and implement 40 safety improvements projects statewide per year.

With 50 percent of the State's population residing in the seven county Minneapolis/St. Paul metro area, effective technology systems have become increasingly important to Mn/DOT's success. Thus, in 1991, the State's Intelligent Transportation Systems (ITS) program was launched. The program, known as **Minnesota Guidestar**, is administered by Mn/DOT's Office of Traffic, Safety and Operations (OTSO) and is responsible for the State's traffic safety technology systems. In partnership with the FHWA, the University of Minnesota, and numerous other public and private partners including ITS Minnesota (the State chapter of ITS America), OTSO oversees the ITS initiatives.

With the development of several new programs in the early 1970s, Mn/DOT recognized the need for a central control facility. Thus, in 1972, Mn/DOT built the original **Regional Traffic Management Center (RTMC)**, having the primary purpose of facilitating the management of the State's freeway system in the Twin Cities metro area. It was – and still is – one of the most successful and comprehensive facilities of its kind in the country.

Today, Minnesota's RTMC is located in Roseville next to the Metropolitan District headquarters of Mn/DOT. The new RTMC functions with the primary purpose of integrating Mn/DOT's Metro District Maintenance Dispatch and OTSO with the DPS State Patrol Dispatch. With these organizations unified in one communications center, the State has the added benefit of a solid communications and computer infrastructure for coordinated transportation management on metro freeways during commuting periods, as well as special events and major incidents.

## **State Data Systems**

Among the many factors impacting Minnesota's traffic safety programs, the importance of the State's data systems is near the top of the list. Historically, the traffic safety community has assigned a high priority to providing accurate, quality data for the use of State and local agencies.

In order to collect pertinent data, crash report forms are periodically reviewed and updated. This effort, led by OTS with involvement from Mn/DOT, DPS Driver and Vehicle Services (DVS), the State Patrol and local law enforcement agencies, helps to keep data relevant to the initiatives that Minnesota is pursuing across the State. For example, the crash report now allows law enforcement officers to check a box suggesting an engineering review of the crash location. Officers have been instructed on how to use the new forms and are provided with engineering examples as a reference.

Minnesota has also developed a crash analysis software for local road authorities. Known as the Minnesota Crash Mapping and Analysis Tool (MnCMAT), the software was designed using Iowa's Crash Mapping and Analysis Tool (CMAT) as a model. Up to ten years of crash data can be accessed and sorted in a number of different ways. Moreover, electronic pin mapping of crashes is available to county partners so they are aware of specific roadways that need attention. And, data is provided to the counties in an electronic medium which has a geographic information system (GIS) interface built into it. MnCMAT provides crash mapping analyses that help to drive the planning and implementation of the State's highway safety programs. Every county engineer in the State has MnCMAT. In fact, some of those engineers helped develop the system and joined forces with Mn/DOT's State Aid for Local Transportation (SALT) division to provide training for others. With county engineers reaching out across 87 counties to help each other, training was completed in a timely manner and peer-to-peer relationships across the State were strengthened.

The State's attention has extended beyond crash data to other valuable information sources. Since 1975, the OTS has maintained a sophisticated and detailed DWI arrest information database. The database, among the few in the United States that compiles all of the State's impaired driving data, has proven to be a strong tool for targeting programming. Researchers produce an annual detailed report analyzing the data from a variety of different angles including: number of convictions per county, number of arrests per county, and number of DWIs and repeat DWIs in each judicial district.



Early attempts in the late 1990s to sustain a Traffic Records Coordinating Committee (TRCC) resulted in mixed success. In 2006, the OTS lead an effort to revitalize the TRCC and greater success was achieved, in some part, because more Federal money through the section 408 program had become available to support data projects. A TRCC Coordinator was named and resides within the OTS. Multiple agencies participated in developing a comprehensive traffic records plan with support from the DPS Commissioner and the State Court Administrator. The TRCC identified 19 projects for inclusion in the Traffic Safety Information System (TSIS) Strategic Plan with a total estimated budget of \$5.2 million through September 2009.

Minnesota's data resources are not only used for planning and programming but also for disseminating information to the media. Both are thought to be critical aspects of the State's traffic safety program. From the local to the State level, every aspect of traffic safety is driven by data which is carefully retrieved and analyzed. In fact, it has become such an integral part of their programming, it is difficult to obtain support to initiate any projects without first showing that the data has been checked.

### **Catalysts for Improvement: Mn/DOT and DPS**

With fatalities on the increase in the late 1990s, Minnesota made a proactive decision to change the way traffic safety was being addressed. Beginning in 1998, at the direction of the agencies' commissioners, Mn/DOT began meeting with the DPS to identify a systematic, coordinated approach to working together. These meetings identified the increasing number of fatalities as the common interest.

The partnership between the two agencies signaled a significant change from the way traffic safety had previously been addressed. Each agency had primarily worked within their own sphere of responsibility with Mn/DOT managing the engineering aspects of road safety and the OTS implementing behavioral programs.

The two agencies met monthly from 1999 through 2000 in an effort to identify a better means of collaboratively working to improve safety. While meeting, the agencies continued to implement their own programs, but began to identify common partners and develop groundwork to bridge the engineering and behavioral divide that had existed. Finding common ground required a strong commitment from both agencies to overcome past differences. The emergence of individual efforts by champions from each agency kept the process moving forward, fostering the successful traffic safety partnerships that exist today.

## **Building a Collaborative Culture of Safety**

### **North Star Workshop: The Beginning of the *Toward Zero Deaths* (TZD) Program**

In 2001 – after two years of meeting to discuss ways to improve collaboration – Mn/DOT, DPS, the FHWA division office, and the NHTSA regional office sponsored a workshop hosted by the University of Minnesota Center for Transportation Studies

(CTS). Known as the 'North Star Workshop', the event brought together 120 multi-disciplinary attendees. Representing local, regional, State, national and international organizations and agencies, each of the attendees was a safety stakeholder. Non-profit organizations and safety-related industry representatives were also in attendance.

During the workshop, the main objectives were to share information – integrating and connecting agendas – and identify new approaches to reducing fatalities and life-threatening injuries on Minnesota roadways. In addition, the group was asked to ultimately develop an action plan that could be successfully implemented, not only in Minnesota, but as part of other States' safety initiatives, as well.

The North Star Workshop provided an opportunity to look at traffic safety programs across the country, as well as internationally, to see if what was being done in other States and countries to reduce fatalities could be applied in Minnesota. The results of the workshop were extremely positive. Attendees left with a sense of excitement and forward momentum culminating in the birth of Toward Zero Deaths (TZD).

### **TZD Development**

TZD has since become the overriding influence in the State under which most traffic safety planning is conducted. Not only has it helped to encourage statewide partnerships, but it has also served as a springboard for the development of the State's Comprehensive Highway Safety Plan (CHSP). And, most recently, as required in 2005 by the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), has also led to the creation of the State's Strategic Highway Safety Plan (SHSP).

The new vision was adopted as part of the CHSP development process in 2003 to reduce fatalities on Minnesota's roads to fewer than 500 by the year 2008 through the application of the 4 Es (engineering, enforcement, education and emergency services), research activities and community involvement. This vision helped to focus all partners on one common goal.

Following the North Star Workshop, a TZD Program Team was established to oversee future development. The multi-agency partnership was led by DPS and Mn/DOT along with the Minnesota State Patrol, FHWA, NHTSA, county and city officials, the University of Minnesota CTS, and community coalitions.

Shortly following the Workshop, the terrorist attacks on 9/11 occurred and necessarily placed a heavy focus on security in the State. Despite this temporary setback, the OTS was able to keep the TZD concept alive by implementing small projects through their emerging Safe Community network as well as continued statewide Safe & Sober enforcement and public information campaigns.

Today, the concept of TZD is strong and growing. The role of this dedicated group of stakeholders from across the State is still being refined. Most recently, guidelines for TZD stakeholder status are being drafted by the OTS to add more structure. All levels



must have a multi-agency coalition and an activity directly related to a CHSP strategy. Consideration is being given to creating three levels of TZD partnership:

1. TZD Region - contiguous and overlapping land area
2. TZD Partnership – two or more separate organizations, that are reasonably proximate but not necessarily contiguous, working together on similar traffic safety efforts
3. TZD Project or Grant – an individual project linked to a strategy within TZD and the CHSP

OTS grant funding is used to support many TZD efforts. OTS grantees, Safe Community programs and county and local TZD coalitions are significant partners. These agencies and others gather monthly for a joint TZD meeting co-chaired by OTS and Mn/DOT OTSO to review ongoing activity, identify new initiatives, and share experiences from TZD partners across the State. The meetings reinforce the collaborative and cooperative partnership between the DPS and Mn/DOT and further strengthen the statewide culture of safety.

TZD has enabled all of Minnesota's traffic safety stakeholders, whether grantees or not, to rally around a single goal. As long as data and information drive decisions, many stakeholders can be a part of the process.

To keep abreast of the ever-changing picture of fatalities, daily updates on the cumulative total of fatalities compared to the previous year are provided to 13 of the key individuals in the TZD State partner agencies. This activity keeps the goal of TZD and the CHSP in the forefront and provides an immediate analysis of whether gains are being made.

TZD members recognize that achieving the goal of zero deaths requires cooperation among all levels of government. The TZD program encompasses engineering, enforcement, education, and emergency medical/health service programs to find the best practices to achieve a future where traffic fatalities and life-changing injuries are rare events.

### **Minnesota's Comprehensive Highway Safety Plan**

In 2003, the Directors of DPS, OTS and Mn/DOT OTSO attended a meeting in Washington D.C. to learn more about national traffic safety initiatives. What they brought back from the meeting, however, was more than just knowledge. They returned having accepted an opportunity to be a 'lead' State in the development of a strategic highway safety plan. For Minnesota, this plan was first named the CHSP and was based upon the American Association of State Highway and Transportation Officials' (AASHTO) model SHSP.

The Directors jointly agreed that the development of a CHSP was the critical component they needed to provide structure for the TZD initiative. TZD and the CHSP functioned

as parallel programs complimenting each others' strengths. While the TZD provided the structure needed to firmly establish relationships within the traffic safety community, the CHSP served as a reminder of established traffic safety priorities, emphasis areas and strategies. The CHSP also helped to guide the organizations as they worked together to implement data-driven research-based projects.

To accomplish the development of the CHSP, a second workshop was held to bring together engineering, law enforcement, emergency services, child passenger safety advocates, public health and other partners in the traffic safety community to examine crash data and identify priority areas based on AASHTO's model. This conference again provided an opportunity to reinforce the TZD concept and establish zero traffic deaths as the goal for the State's traffic safety community.

During the conference, attendees used a comprehensive, systematic process to develop the CHSP from which five Critical Emphasis Areas (CEAs) were identified:

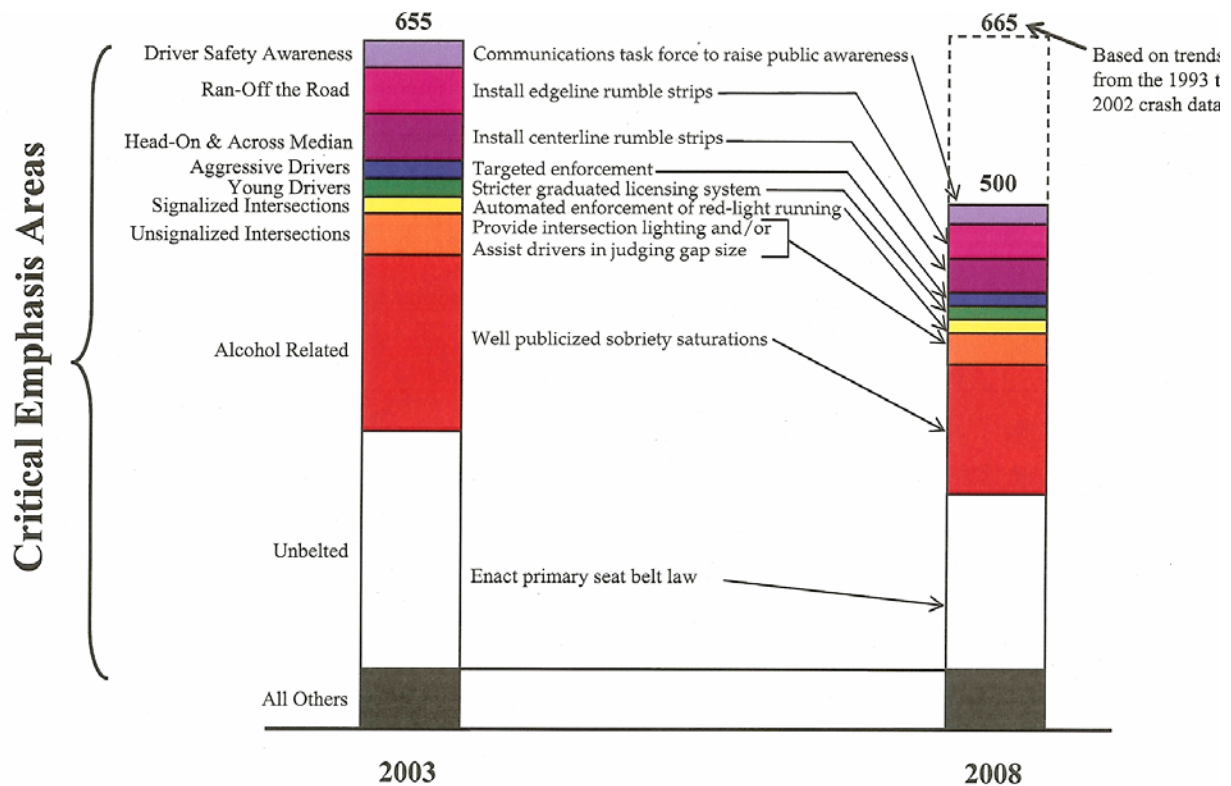
1. Reducing impaired driving and increasing seat belt use
2. Improving the design and operation of highway intersections
3. Reducing lane departure crashes
4. Addressing young drivers and curbing aggressive driving
5. Increasing driver safety awareness and improving information and decision support systems

To further develop the CEAs, the State's safety partners met again to discuss the safety strategies associated with each of these areas. This effort resulted in 15 items identified as Critical Strategies, believed to have the greatest potential of reducing traffic fatalities. The strategies ranged from providing adequate law enforcement resources to developing a statewide trauma system. A detailed action plan was developed for each Critical Strategy, along with an Effectiveness Spreadsheet that estimates the cost and number of lives saved for a given deployment.

In 2005, Minnesota's CHSP won the FHWA 2005 National Roadway Safety Award for having one of the best plans in the country.

### **TZD Initiatives**

As part of the CHSP, Minnesota developed a **Safety Toolbox** of activities that align with the priorities and emphasis areas. The Safety Toolbox is a principle component to assist in engaging State and local agencies in a systematic way to address the top CHSP priorities. The CHSP strategies are a key consideration for funding decisions in selecting both behavioral and engineering projects.



**Figure 3. Safety Goal and Example Strategies**

SOURCE: Minnesota Department of Public Safety – Office of Traffic Safety and the Minnesota Department of Transportation

The CHSP Safety Toolbox contains over 120 strategies organized by category and then by priority. Many can be implemented by local agencies and are relatively low cost solutions. The Toolbox also includes general guidance on implementation for appropriate situations and how local agencies can develop a systematic, prioritized plan.

Historically, Mn/DOT had funded projects on a reactive basis, fixing problematic areas primarily where crashes had already occurred. With the CHSP in place, however, Mn/DOT changed the way crash locations are identified, taking a more proactive approach toward prevention. Locations are determined based upon crash characteristics, then examined for appropriate solutions and targeted for correction. This change in approach was a direct result of the analysis that was completed in the process of drafting the State's CHSP.

The **Central Safety Fund** was created as an initiative of the CHSP to supplement the State's Highway Safety Improvement Program (HSIP) using the State's section 164 transfer funds. The DPS OTS and Mn/DOT agreed to earmark these dollars to support statewide engineering, enforcement, education and emergency medical services (EMS) projects identified in the CHSP. The funding supports only performance-based strategies that address infrastructure or behavioral safety problems on all public roads.

The Central Safety Fund focused on three projects during the first two years of implementation:

- Highway Enforcement of Aggressive Traffic (HEAT)
- County CHSP safety projects
- Cable median barriers

### **HEAT**

In 1997, the State had raised speed limits on many roadways. Tragically, however, as speed trends rose, so too did the number of fatalities. The information identified the need for a statewide speed management initiative to better control speeding, increase safety on State roadways, and remind drivers that the posted speed limit is the speed limit. One of the initial projects supported by the CHSP Central Safety Fund surfaced after the collection and analysis of a significant amount of data revealed the need for a more intensive effort to address speeding drivers. Thus a pilot project known as **HEAT** was initiated in 2005 to test, support, and further educate the public about higher speed limits, with the ultimate goal of simply “putting the heat back on drivers.” The Fund provided a total of \$3 million for the HEAT project: \$2.5 million for enforcement, \$350,000 for paid media, and \$150,000 for project evaluation.

For the HEAT project, speed limits were raised from 55 to 60 miles per hour on 930 miles of roadways where the design structure would support higher speed limits to foster speed consistency. Speed limits were strictly enforced. Troopers targeted areas where fatalities were over represented, and worked overtime when speeding traffic was heaviest. Moreover, the State Patrol analyzed data to learn how to schedule patrols more effectively and to maximize the use of limited resources.

Along with the launch of HEAT, a statewide public education campaign was implemented including press releases and public service announcements to inform the driving public. Immediately prior to the start of the campaign, the Lt. Governor and DPS Commissioner traveled around the State to jointly publicize the project generating significant media interest. Throughout the 22 week program, State agencies continued to work as partners within the framework of the CHSP. Combining enforcement, education, and engineering, as well as EMS safety efforts, the activities of participating agencies were supported by the CHSP Central Safety Fund. The resulting project generated 10,000 public information spots (not including earned media), stopped 88,000 vehicles and generated 34,000 citations for illegal speed. The initial data – gathered through automated traffic recorders – showed a statistically significant reduction of crashes and a large drop in high-end travel speeds. Equally noteworthy, however, is the cooperative effort that took place to implement the pilot, and the multi-disciplinary approach used to address speed.

Due to the effectiveness of the program in achieving its objectives, it was recommended that the program be continued. The second year of the Speed Management Project began in June 2007 in an effort to continue to educate the public that the posted speed is the speed limit.

### **County CHSP Safety Projects**

One of the essential keys to Minnesota's success has been the State's ability to proactively work with local agencies on the development of roadway projects. The decentralized structure of Mn/DOT has facilitated the local development of roadway improvement plans through the State's system of Area Transportation Partnerships (ATP). ATPs were initially established as a result of the requirements of the ISTEA. Aligning very closely with the Mn/DOT Districts, the ATPs continue to serve as a primary conduit for the preparation of local transportation plans and programs.

Although historically counties had not been a big focus of the ATPs, after examining the data and realizing that over 50 percent of fatal crashes were occurring off the state trunk highway system, Mn/DOT talked with stakeholder groups and county engineers to encourage them to become involved in the partnerships.

One of the first CHSP projects was a solicitation to the counties to align their plans with the State's. In 2005, the inaugural year of the program, Mn/DOT offered \$2 million to support county projects that were coordinated with the CHSP. And, 27 projects - at \$75,000 per county - were undertaken. In 2006, \$4 million in Central Safety Fund monies was made available which resulted in 67 of 87 counties submitting a proposal and 43 counties receiving funding for low cost solutions.

The types of projects which were funded include:

- Wider shoulders/enhanced pavement markings/edge line rumble strips
- Intersection lighting
- Enhanced signing
- Guardrail upgrades
- Geometric improvements

### **Cable Median Barrier**

As traffic volumes continued to grow, Minnesota experienced an increase in cross median crashes. Installing cable median barriers in strategic locations has proven to be effective in preventing these crashes. The projects have been funded through the Central Safety Fund and the ATP's HSIP Funds. Project selection is based on crash data, traffic volume and existing median width following AASHTO guidance. A formal study is being conducted on the installation of these barriers. Preliminary data indicates that to date no fatal crashes due to cross media crashes have occurred at these locations.

The creation of a **statewide trauma system** was identified as one of 15 critical strategies within the CHSP and is a TZD initiative. More than 60 percent of fatalities occur on rural roads. When it comes to responding to critical injuries, time is of the essence. Emergency response time and trauma center care drastically impact the chances of survival. In 2005, the State Legislature approved the allocation of \$550,000 for the creation of a statewide trauma system. The legislatively approved funding was used to identify trauma centers at levels 1, 2, and 3; determine the level of trauma care needed; then provide the necessary care. This information goes to emergency responders when assessing the best location to send victims for treatment.



Having set up criteria for treating and transporting seriously injured people and a process by which hospitals can be designated as trauma hospitals, Minnesota's goal for the statewide system is to eventually have every hospital become a trauma hospital. Based on information from other States with similar systems, an estimated reduction in fatalities of nine percent could be realized by 2009 when the system is fully operational.

One widespread – and hazardous – driving habit is providing inadequate following distance. In fact, most rear-end crashes are caused by the driver's inattention to how closely they are following the vehicle in front of them. This, of course, is especially dangerous in less than ideal driving conditions (e.g., fog, rain, snow). To help motorists identify and maintain safe following distances, Mn/DOT, OTS and local project partners in 2006 implemented a **"Stop Tailgating"** pilot program on Highway 55 in Wright County between Buffalo and Rockford, Minnesota.

Using a series of dots – white circular pavement markings – painted on the road, and signs directing drivers to keep at least two dots between them and the car ahead of them, the project promotes driver awareness of the need for adequate space between vehicles. This is another example of how TZD uses data and creates new programs.

The impact of TZD and CHSP on Minnesota's traffic safety culture should not be underestimated. The State built an overarching theme under which traffic safety could be united. With the development of a comprehensive plan as a guide, Minnesota strengthened partnerships at the State and local levels, bolstering their network and adding to their success.

Moreover, with the creation of a common vision to strive for zero deaths, the unification of Safe Communities, and the revitalization of traffic safety through leadership and champions at Mn/DOT and DPS, the TZD and CHSP have made great strides toward reaching Minnesota's safety goal.

### **TZD Continuing Leadership**

The DPS and Mn/DOT, in partnership with the University of Minnesota CTS, have continued to support the TZD through an annual statewide conference involving stakeholders from multiple traffic safety disciplines. Since the first North Star Workshop in 2001, Minnesota has fostered a broad network of TZD traffic safety partners to raise awareness and develop tools to reduce roadway fatalities.

The first North Star Workshop spurred a great deal of excitement among participants, and it was there that the TZD concept was born. With the aggressive goal of TZD in place, however, conference leaders recognized the need to focus on keeping the TZD momentum strong. Thus, putting a face on the numbers became more significant at the second conference, as well as at future conferences.

As part of the overall effort to help personalize the TZD cause at the 2005 conference, the parents of three boys killed by a drunk driver talking on a cell phone were invited to

speak. They shared a touching video of their sons' lives and brought with them the clothing their boys were wearing during the crash. Seeing the parents lay out the clothes on the conference podium, the audience was visibly impacted and left the meeting with a renewed enthusiasm for the importance of traffic safety and the TZD initiative.

The annual TZD conference provides a forum for traffic safety partners from all four Es to share information on best practices and to identify new approaches to reducing the number of traffic fatalities and serious injuries on Minnesota roads.

## **Minnesota's Traffic Safety Community**

### **Other Key Partnerships**

#### **Minnesota Safety Council**

The Minnesota Safety Council, a not-for-profit organization, has a long history of working to keep Minnesotans safe from unintentional injuries including traffic crashes. Among the Council's many initiatives, its partnership with the DPS and OTS to coordinate the Minnesota Seat Belt Coalition has been extremely valuable. Their ability to rally support and educate people across the State has allowed them to gather the resources and support they need to get key legislation passed, most recently taking on the primary enforcement seat belt legislation for the State. By bringing individuals and organizations together, the Coalition has had success not only in moving forward the legislative agenda but also increasing seat belt use through education about the legislation and related issues.

#### **AAA Minnesota/Iowa**

AAA Minnesota/Iowa has also been a strong supporter of Minnesota's traffic safety efforts over the years and brings to the table a strong interest and passion for the issues, as well as funding to help further the cause. In fact, the current Executive Director of AAA Minnesota/Iowa has proven to be a very committed partner, donating funds to the State's traffic safety efforts for communities, as well as providing child restraint seats statewide for children in need. Other AAA funding has been used to enhance OTS programs like the Safe & Sober luncheon awards, as well as non-grant funded traffic safety enforcement programs. The organization is also dedicated to helping work on key legislation, and recently took on the child booster seat law initiative.

#### **MADD Minnesota**

With a primary focus on impaired driving legislation, MADD Minnesota has also been willing to lend support to other key traffic safety issues. In fact, when the OTS office held a summit to discuss the ignition interlock issue, MADD helped with the problem solving session. MADD and OTS have developed a strong partnership and regularly assist each other in brainstorming new ideas. MADD has worked on underage drinking projects, has lent support for the primary enforcement seat belt legislation and is an active member of the Seat Belt Coalition.

### **Minnesotans for Safe Driving**

Minnesotans for Safe Driving – a non-profit organization – works similarly to MADD, but their involvement is actually much broader. Dedicated to education and generating public interest in traffic safety, the group provides victim services, supports public education and awareness by offering speakers, training and driver impact panels and monitors court cases related to public safety. Additionally, the organization works to positively impact attitudes regarding non-alcohol related crashes caused by speeding, and aggressive and inattentive driving.

### **Network of Employers for Traffic Safety (NETS) Program**

Also coordinated by the Minnesota Safety Council, the NETS program provides employers with training and resources designed to help educate employees about prevention of traffic related injuries and deaths - both on and off the job. Part of the national NETS program, Minnesota NETS is funded through OTS.

### **Law Enforcement Liaisons**

Three Law Enforcement Liaisons (LELs) have been contracted by OTS to assist with the Safe & Sober campaign and serve as a valuable connection with the many local law enforcement agencies across the State. The local agencies rely on the LELs to provide them with the necessary resources and information they need to conduct their traffic safety efforts. Not only do they travel with supplies of brochures, posters, and small incentives to remind governing bodies and officers of the importance of traffic safety, they are also available to assist with media contacts to generate coverage of enforcement mobilization activity.

### **University of Minnesota Center for Transportation Studies (CTS)**

Created in 1987 to facilitate better cooperation among the University of Minnesota faculty and State and Federal departments of transportation, CTS has also served as a key resource and the host of the TZD conferences. Pulling from a large spectrum of disciplines within the University – engineering, planning, economics, public policy, computer science, human factors, and environmental studies – CTS has been instrumental in strengthening the University's role. CTS funding sources include numerous Federal, State, local, and private-sector sponsors which generate more than \$18 million annually for research, education, and outreach programs. CTS assisted the State in developing a crash analysis software tool for local road authorities based on a program developed by Iowa State University's Center for Transportation Research and Education (CTRE). The easy-to-use CD-ROM based tool contains current crash data and a customized program for simple queries and basic analysis. Through the State's Local Road Research Board and the Local Technical Assistance Program (LTAP) located at CTS, the State brought this tool to the cities and counties at a very low cost and in a very short time frame. The crash tool is easily implemented. LTAP professionals and the State Traffic Safety Engineer provide training and maintain future updates.

### **Federal Highway Administration (FHWA)**

The FHWA division office which serves Minnesota exclusively has been a solid supporter and important resource for the State. While their primary purpose is to

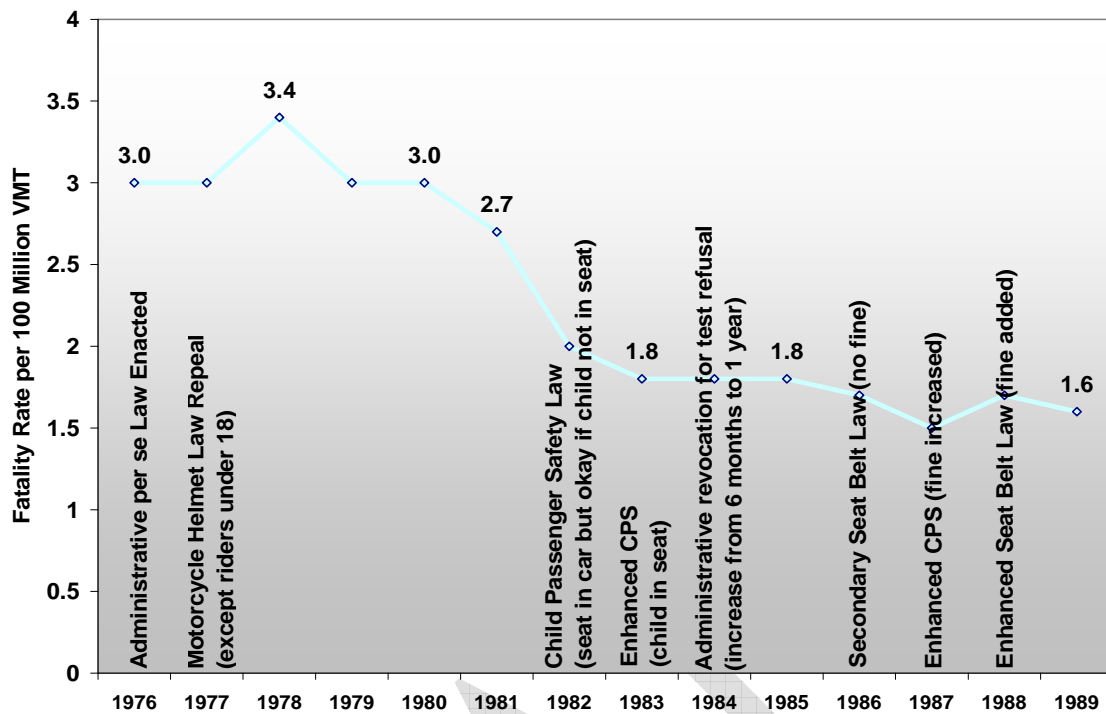


support the Federal-aid highway program to State and local transportation agencies, FHWA has also made it a priority to develop close working relationships with organizations including Mn/DOT, the seven MPOs in the State's major urban areas, and many of the 854 cities and 87 counties. Moreover, the FHWA has a strong working relationship with the University of Minnesota, as well as many of the trade organizations and interest groups throughout the State. Providing professional assistance and guidance, the FHWA has fostered relationships that have allowed them to understand the unique needs of each organization and tailor their services accordingly.

### **Legislative Support**

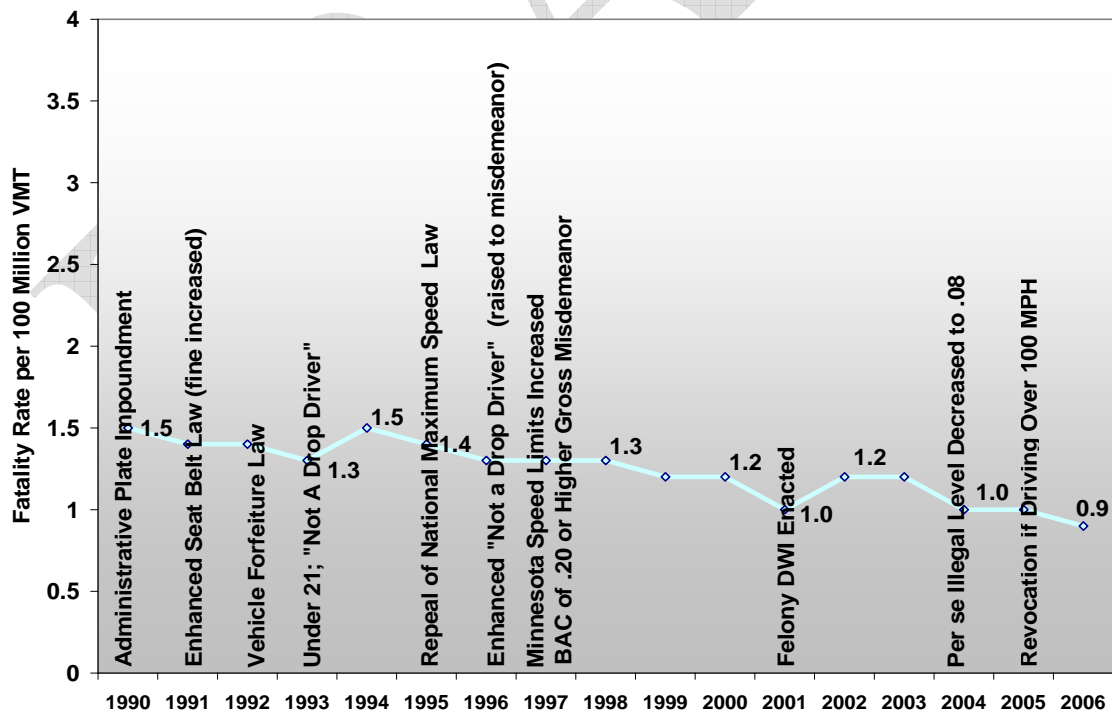
Historically, the Minnesota Legislature has taken a hard line approach against impaired driving, putting laws into place that contributed significantly to early gains in reducing fatalities. In fact, Minnesota was the first of the States to enact an ALR law in 1976. The original law was further enhanced just two years later to provide arresting officers with the ability to act as “agents of the commissioner” to take driver’s licenses from persons under arrest and send them directly to the DPS Commissioner.

Unfortunately, the 1978 legislation also provided that license revocation would not go into effect until 30 days after the driver license was taken, allowing time for appeal and delaying the loss of driving privileges. In 1982, Minnesota enacted an amendment to the law to expedite the revocation process and assure that license revocation could not be delayed through the appeals process. The amendment stipulated that a temporary driver’s license could still be issued to the driver, but only for seven days. Moreover, the request for a hearing would no longer prevent the revocation from going into effect. This process makes Minnesota almost – if not completely – unique among other States as it gives officers an incentive to go through the arduous procedure of making a DWI arrest.



**Figure 4. Major Policy Initiatives and Fatality Rates in Minnesota from 1975 - 1989**

SOURCE: Minnesota Department of Public Safety - Office of Traffic Safety



**Figure 5. Major Policy Initiatives and Fatality Rates in Minnesota from 1990 - 2006**

SOURCE: Minnesota Department of Public Safety - Office of Traffic Safety

Another important aspect of the ALR law was the mandate that counties with populations of over 10,000 people establish an 'Alcohol Safety Program.' These programs conduct alcohol assessments on DWI offenders and report the results to the courts. The combination of law enhancements and DWI programs have over time contributed not only to cultural change, but also to greater awareness of the impaired driving issue on the part of the driving public.

Since those early years of enacting aggressive policies on impaired driving, there has been less success in enacting other key traffic safety initiatives. In 1977, the Legislature repealed the State's motorcycle helmet law for riders 18 years of age and older. Several attempts to enact primary enforcement seat belt and booster seat laws (for children up to the age of 8 years) were also unsuccessful. And, Minnesota had the dubious distinction of being the last State to enact a .08 BAC (blood alcohol concentration) law.

Despite these setbacks, however, the Legislature has been responsive in other ways to support traffic safety. For example, Minnesota's statewide trauma system was established by the Legislature in 2005. State funding for the Rural Road Safety Account (RRSA), a sub-program within the Local Road Improvement Program, was also legislatively established. The RRSA acts as a resource for county engineering construction and operational improvements that focus on reducing fatal and serious injury crashes. Enhancements to underage drinking laws have also been supported legislatively. Child passenger safety laws have been enhanced, and a high BAC law was enacted in 1997.

## Champions

The true champions of the State's success emerged when the insistence of the agencies' leadership resulted in forced meetings where a common concern about traffic fatalities eventually emerged. The group realized that business must be conducted in a different way. These individuals began the development of a cooperative and collaborative approach to traffic safety that continues to grow stronger even today.

Following this action, the individuals that formed the State's team to look for new solutions are the leaders that deserve special recognition. Their willingness to meet regularly over the course of two years and diligently work together around a unifying theme made a significant contribution to the State's most recent success. The outcome of that team's collaboration was the North Star Workshop where the current leaders of the TZD initiative later emerged. Without the passion and leadership of these two individuals, the full potential of the vision and the momentum created at the workshop may not have been realized.

**Kathy Swanson**, Director of OTS for many years until recently retiring, and, **Bernie Arseneau**, Mn/DOT's State Traffic Engineer, were the two primary driving forces in building the spirit of cooperation and cementing relationships that have allowed Minnesota to reach its current level of success. As co-chairs of the monthly TZD meetings, together they have provided the necessary combination of energy,

commitment and spirit. As representatives of Minnesota at the early meeting in Washington D.C. to review the AASHTO concept of a model CHSP, they jointly saw the potential of being able to give substance to the TZD concept and returned to spread their enthusiasm for the development of the State's CHSP.

Kathy Swanson was a member of the original eight member team from DPS and Mn/DOT charged with finding common ground between the agencies. As the Director of the OTS, Swanson had also been deeply involved in the earlier efforts to implement behavioral programs that laid the ground work for TZD partnerships through the Safe & Sober campaigns, Safe Communities and other NHTSA funded programs.

Bernie Arseneau, although not actively involved in the early process of building the partnership, came on board as the Director of Mn/DOT OTSO in 2003. This is the critical time when TZD re-emerged to become the statewide vision for safety. His enthusiasm and belief in TZD have been key factors in developing the relationships necessary for the continued expansion of the concept. Arseneau was also instrumental in building trust and developing partnerships with county engineers and others at the local level. As a champion of TZD, his staff soon embraced the concept and further spread the message to their counterparts at the local level.

Both of these individuals have been quick to deflect individual recognition preferring to instead highlight the importance of the contribution of the members of their organizations and others statewide. It is this spirit of cooperation that best represents the new paradigm in Minnesota and has broken down the barriers that stood in the way of true multi-agency cooperation. Through their efforts, a future has been built where turf issues no longer exist and the vision of TZD can reach all corners of the State.

One other individual champion must be mentioned due to the role he has played in assisting Minnesota and the nation address the issue of impaired driving with outstanding results. **Steve Simon**, a law professor at the University of Minnesota, has had a long-term interest in DWI issues. He did prosecution work as part of the Alcohol Safety Action Programs (ASAP) conducted in Minneapolis in the early 1970s. Simon continues to this day to be regarded as a prominent expert in the area of DWI countermeasures research and is influential in the development of DWI legislation.

## **Outreach and Local Programs**

### **Media and Communication**

The use of media in Minnesota has evolved and improved significantly in the past five years. Much of the improvement can be attributed to the depth of knowledge and level of communication skills located within the DPS, as well as valuable guidance from NHTSA.

The State has changed the way messages have been developed as well as the way they are delivered. Public information messages, for example, have become much more

directed at changing specific driver behaviors. Campaigns are created to target “at risk” audiences identified by the data within the selected traffic safety initiatives.

News releases are custom developed by OTS for their partners within the Mn/DOT districts throughout the State. Local data is used and the packets are supported with PDF maps, clip art, talking points, and localized news conference templates. A significant amount of information is also available on the OTS web site, which enhances ready access to materials specifically designed for the current programs.

With a growing network of public and private partners throughout the State, outreach and collaboration have greatly improved OTS’ ability to garner earned media coverage to supplement their comprehensive and well researched paid media program.

### **Mn/DOT Collaboration with Local Engineers**

The primary mechanism for Mn/DOT outreach to local engineers is through the State’s system of ATPs. Each ATP conducts data-driven analysis of their local safety problems and submits an application for review to Mn/DOT. Sites selected for funding must demonstrate a crash history or a potential to reduce future crashes. The system provides a practical mechanism for Mn/DOT to distribute Federal funding for roadway improvements. The Mn/DOT districts compete within the Department for traffic funding in a similar manner and must develop data-supported strategies which can be demonstrated to support the CHSP.

In support of the ATPs and local governments, Mn/DOT’s SALT division links the department with city and county engineers to transfer technical expertise and determine new ways to improve the State's highway system. Within the past two years, the SALT division has created a dedicated statewide Traffic Safety Engineer position to support county and city engineers who request assistance with analyzing crash data and facilitating their access to technical resources at Mn/DOT as well as FHWA.

Mn/DOT is fortunate to have a special partner to provide additional outreach and technical resources to county engineers. The **Minnesota County Engineers Association** (MCEA) has representation from all 87 counties in the State and has been a key factor in sharing safety information statewide. Recognizing a need to better coordinate and distribute safety information, in 2002 the MCEA created a task force to explore methods of sharing low cost safety improvements with county engineers. Since that time, the task force has grown to be the County Highway Safety Committee. Engineers from each of the eight Mn/DOT districts are represented as well as the FHWA division, CTS, Mn/DOT OTSO, Mn/DOT SALT, the National Association of County Engineers (NACE) and the American Traffic Services Safety Association (ATSSA).

Recognized as one of the more active groups, the Committee provides information, research, ideas, guidance, and leadership for MCEA members on traffic safety issues and distributes a bi-monthly newsletter keeping safety in the forefront. Each newsletter includes a one page overview highlighting low cost safety improvements to build

consistency among county engineers. To further facilitate the distribution of safety information, the Mn/DOT SALT division hosts an email list-serve for county engineers.

The MCEA holds two conferences each year which attract heavy attendance and active participation by Mn/DOT and the District personnel. The gatherings are an excellent opportunity for them to network with peers as well as county engineers.

Established in 1959 through State legislation, the **Minnesota Local Road Research Board (LRRB)** has sponsored more than 150 individual projects on a variety of topics. The LRRB recently reported on crash analysis as a method to identify hazardous low volume roads. LRRB research generally falls into four main categories: materials, drainage systems and other utilities under the pavement, roadside environment, and bridge construction and maintenance. Local engineers submit ideas to the LRRB which selects and approves proposals. Mn/DOT provides administrative support and technical assistance to the LRRB. Researchers from Mn/DOT, universities, and consulting firms conduct the research, and the LRRB monitors the progress of the projects. The LRRB budget has grown from \$86,000 in 1960 to \$2.3 million currently.

The end result of all of these outreach activities has been the emergence of a strong and well informed network of county engineers with access to a State safety engineer, quality data, and information to implement low cost fixes.

### **Training**

The University of Minnesota CTS provides a variety of training opportunities to local governments including periodic meetings, an annual research conference, and quarterly luncheons with national speakers to talk about “hot” issues, e.g., young drivers and moving toward graduated driver licensing. Mn/DOT also hosts workshops on engineering and safety issues often using topic suggestions from the county engineers.

### **Local Funding Support**

Minnesota has legislatively designated specific funding sources to be made available to local units of government for transportation projects. The Local Road Improvement Program, established by State law, has three types of funding accounts which provide assistance to local agencies in construction, reconstruction, or reconditioning projects with regional significance. The accounts are: the Trunk Highway Corridor Projects Account, the Routes of Regional Significance Account, and the Rural Road Safety Account. In 2006, the Legislature appropriated \$16 million for the Local Road Improvement Program divided equally between the Routes of Regional Significance and Rural Road Safety programs.

The **Trunk Highway Corridor Account** is used as a loan to cities, towns, and counties to assist in paying the local share of trunk highway projects that have local costs which are not funded or are only partially funded with other State and Federal funds. In 2003, the Legislature authorized \$20 million of General Obligation bonds for this account to provide local government loans to help pay their participation share of Mn/DOT projects.



The **Routes of Regional Significance Account** is used for grants to cities, towns, and counties to assist in paying the costs of constructing or reconstructing city streets, county highways, or town roads with statewide or regional significance that have not been fully funded through other funding sources. The SALT division has established procedures for the selection of these projects.

The **Rural Road Safety Account (RRSA)** is used as a grant for counties to assist in paying the costs of capital improvement projects that are intended primarily to reduce traffic crashes, deaths, injuries and property damage on County State Aid Highways (CSAH). Eligibility is based on the ability of each proposed project to reduce the frequency and severity of crashes. The RRSA excludes the 8 metropolitan counties.

By developing these funding mechanisms, the Legislature has clearly recognized the key role that accessibility to funding plays in ensuring the ability of local government to address traffic safety issues.

## **Moving Forward: Minnesota's Evolving Safety Plan**

### **The Strategic Highway Safety Plan (SHSP)**

In early 2007, Minnesota was in the midst of the process of updating the CHSP to meet the new SAFETEA-LU requirements and become the State's official SHSP. The plan was completed in July 2007.

This process will build upon the change of direction for safety strategy that was contained in the first CHSP plan. Safety projects are now implemented by concentrating on low cost, system wide, proactive improvements on all roadways. This focus will continue to be a priority within the SHSP. An Interagency Working Group to assist with development was formed with representation from the following agencies: Mn/DOT, DPS OTS, the Health Department and the FHWA division office. The SHSP will utilize more recent data to verify the emphasis areas and selected strategies. And, portions of other related safety plans will be integrated into the SHSP, such as Mn/DOT's Heavy Commercial Vehicle Safety Plan and the ITS Safety Plan.

The most significant section of the plan contains the implementation strategies. The SHSP will assist Mn/DOT districts and local government partners to identify priority, cost-effective implementation approaches to address safety proactively and provide appropriate corrective solutions. The SHSP will establish safety-related performance objectives that can be monitored to track implementation progress and the outcomes of the recommended safety investments.

As the State moves forward with the approval and implementation of its new SHSP, a key element of the former CHSP will remain unchanged - the TZD legacy goal. Now that the number of traffic fatalities has gone below 500, a new target of "fewer than 400 by 2010" has been adopted. By continuing strong partnerships, remembering what has

worked, targeting resources where they can truly make a difference and using the knowledge gained in the past, a vision for the future will be designed into the Minnesota SHSP to aggressively reduce the number of lives lost on the roadways each year.

### *III. Conclusion*

Acknowledging that the State's best efforts were no longer producing acceptable results, leadership at the highest level made a commitment to ensure that "business as usual" would no longer take place. The agency leaders determined that a major shift in thinking within State government itself was necessary to change the status quo. The result – experiencing the lowest fatality rate in the State's history and one of the lowest in the nation – should be a signal to other States faced with a similar stall in their progress. When tackling a statewide traffic safety issue, leadership and collaboration among State agencies is a key component to unlocking greater success.

The two lead agencies, Mn/DOT and DPS, overcame their differences and utilized a collaborative spirit to spur the development of a new outreach to the traffic safety community and especially to local governments. And, a new vision has become the State's mantra for the foreseeable future – Toward Zero Deaths.

Today, the TZD Coalition is in the driver's seat and is the impetus and key decision maker for the State's traffic safety agenda. The strategic plan is based upon a solid foundation of data. Strategies at the State and local level are selected using research and a Toolbox of effective strategies which is frequently freshened. And, to ensure that the monetary resources necessary to support the plan are available, the State agencies have jointly committed millions of dollars to the Central Safety Fund. The net result is a State that has blown past its initial goal and is now engaged in setting an aggressive new fatality reduction goal for the future.

Despite having developed and implemented a number of successful strategies in the past, Minnesota astutely recognized that even more could be accomplished by abandoning the silos and working together in a new way. It is this spirit of determination and commitment to the safety of the public roadways that will surely guide the State to even greater achievements in the future.

### *IV. Summary of Critical Success Factors*

- **Barriers that no longer exist and which had previously impeded multi-agency cooperation**
- **Unifying theme - Toward Zero Deaths - under which all traffic safety partners can rally**
- **Addressing traffic safety through the implementation of projects that encompass the 4 "E's": engineering, education, enforcement, and emergency services**



- **Stability within the leadership of the State highway safety office**
- **Enthusiastic champions to maintain the momentum Strong partnerships across the State to facilitate clear communication of the goal**
- **Quality data systems to identify problem areas and evaluate effectiveness**
- **Dedicated funding supported by the legislature to improve safety on local roads**
- **CHSP Safety Toolbox for local partners to readily implement countermeasures**
- **Willingness to promote and implement innovative countermeasures based on data**

## *V. Epilogue*

Despite the strong programs that have developed at the State and local level, the State's agencies are continually challenged to maintain a high level of focus on improving traffic safety. The following list identifies the most frequently cited potential "threats" to the continuing success of Minnesota's traffic safety program.

**TABLE 2. POTENTIAL THREATS TO MINNESOTA'S TRAFFIC SAFETY FUTURE**

- Potential changes in key leadership positions and a lack of new champions to keep the energy level high
- Complacency which could erode the commitment to the Toward Zero Deaths goal
- Increasing numbers of aging drivers and more motorcyclists killed on the roads each year
- Focus of safety lost to other issues
- Political road-blocks
- Inadequate funding and/or the need for additional funding resources
- Apathy among segments of the population that do not understand the importance of trying to prevent fatalities
- Losing steam at the legislative level
- Competition for a position of importance in the larger metropolitan areas (among growing traffic congestion, impaired driving issues and unbelted drivers)

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[http://www.transportationfortomorrow.org/pdfs/commission\\_meetings/0407\\_field\\_hearing\\_minneapolis/panel1\\_kathy\\_swanson.pdf](http://www.transportationfortomorrow.org/pdfs/commission_meetings/0407_field_hearing_minneapolis/panel1_kathy_swanson.pdf)

Mn/DOT Regional Traffic Management Center (June 2007)

<http://www.dot.state.mn.us/tmc/>

Rural Road Safety Account (May 2007)

[http://www.dot.state.mn.us/stateaid/forms/SAPrograms/20062007\\_Solicitation.doc](http://www.dot.state.mn.us/stateaid/forms/SAPrograms/20062007_Solicitation.doc)

SCHOT Roundtable Reports MINNESOTA April 2007 (July 2007)

<http://www.transportation.org/sites/scohts/docs/MN%20Safety%20-%20pager%20for%20SCHOTS.doc>

SHSP Development Effort (July 2007)

<http://www.dot.state.mn.us/trafficeng/safety/chsp/index.html>

Toward Zero Deaths (May 2007)

<http://www.tzd.state.mn.us/>

## ***VII. Interviewees***

Bernie Arseneau Director and State Traffic Engineer, Office of Traffic, Safety & Operations - Mn/DOT

Dan Brannan, Traffic Safety Specialist, Office of Traffic, Safety & Operations - Mn/DOT

Nathan Drews, Senior Transportation Generalist, Traffic Data - Mn/DOT

Dave Engstrom, State Traffic Safety Engineer, Office of Traffic, Safety & Operations - Mn/DOT

Wayne Fingalson, County Highway Engineer, Wright County Highway Department

Lars Impola, Traffic Studies Engineer, - Mn/DOT Metropolitan division

Matt Koukel, Senior Transportation Systems Supervisor, Office of Transportation Data and Analysis - Mn/DOT

Wayne Lemaniak, Program Support Supervisor, Metropolitan Division – Mn/DOT Metro

Donald McNamara, Regional Administrator, NHTSA Region V

Katherine Burke Moore, Deputy Director, Office of Traffic Safety - Department of Public Safety

Susan Palmer, State Programs Administrator, Office of Traffic Safety - Department of Public Safety

Alan Rodgers, Research Analyst, Office of Traffic Safety - Department of Public Safety

Kevin Roggenbuck, Transportation Coordinator, Transportation Advisory Board  
Metropolitan Council

Jean Ryan, Impaired Driving Programs Coordinator, Office of Traffic Safety -  
Department of Public Safety

Wayne Sandberg, Deputy Director, Assistant County Engineer, Department of  
Transportation Washington County

Tom Sorel, Division Administrator, Minnesota FHWA

Kathryn Swanson, Director, Office of Traffic Safety- Department of Public Safety

Mark Visecky, Traffic Support Engineer, State Aid for Local Transportation -Mn/DOT

## APPENDIX -

### CASE STUDY QUESTIONS FOR STATE VISIT

1. What convinced top leadership to embrace safety and coordinate efforts?
2. What were the processes used that brought about the institutionalization of safety?
3. How did safety become a focus for other agencies (i.e., MPOs, law enforcement, EMS)?
4. Who or what agencies were the champions for safety in the State and what did they do?
5. How are resources shared among State agencies and with local agencies (staff, technical information, and data)?
6. What types of public education efforts have been undertaken?
7. How has the State utilized partnerships in general, including the State's relationship with Federal partners?
8. What motivated elected officials to embrace traffic safety issues?
9. What have been the primary traffic safety regulatory and enforcement initiatives over the years?
10. How was the cost of safety initiatives balanced with other demands on resources?
11. What types of coordination and technical support are available for safety analysis and programming?
12. How was the process for developing the SHSP determined?
13. What agency is primarily accountable for oversight of the SHSP?
14. Are performance measures in place to measure the results of SHSP strategies?
15. What is the biggest threat to sustaining the traffic safety gains that have been made?

#### Case Study Focus Areas

<ol style="list-style-type: none"><li>1. Background Information<ul style="list-style-type: none"><li>• State demographics</li><li>• Fatality number and rate targets</li></ul></li><li>2. Organizational Leadership<ul style="list-style-type: none"><li>• State agencies</li><li>• Other government agencies</li><li>• Champions</li><li>• Resource sharing</li><li>• Public education</li><li>• Public involvement</li><li>• Partnerships</li><li>• Media</li></ul></li></ol>	<ol style="list-style-type: none"><li>3. Political Leadership<ul style="list-style-type: none"><li>• Leadership</li><li>• State safety legislation</li></ul></li><li>4. Institutionalizing Safety<ul style="list-style-type: none"><li>• DOT organizational structure</li><li>• SHSP development process</li><li>• Accountability</li><li>• Participating agencies</li><li>• Evaluation</li><li>• Funding</li><li>• Data analysis, quality and sharing</li></ul></li></ol>
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